

Robert Roskoski Jr. PUBLICATIONS:

Articles published or in press - to download the pdf or htm file, click on the article number or link.

From the Department of Biochemistry, the University of Chicago (Chicago, Illinois)

- [1.](#) Roskoski, R. Jr. and Steiner, D.F. (1967) Cycloheximide and Actinomycin D Inhibition of Estrogen-Stimulated Sugar and Amino Acid Transport in Rat Uterus. *Biochem. Biophys. Acta* **135**, 347-349.
- [2.](#) Roskoski, R. Jr. and Steiner, D.F. (1967) The Effect of Estrogen on Sugar Transport in the Rat Uterus. *Biochem. Biophys. Acta* **135**, 717-726.
- [3.](#) Roskoski, R. Jr. and Steiner, D.F. (1967) The Effect of Estrogen on Amino Acid Transport in the Rat Uterus. *Biochem. Biophys. Acta* **135**, 727-731.

From the Pharmacology-Biochemistry Branch, Biosciences Division, US Air Force School of Aerospace Medicine, Brooks Air Force Base (San Antonio, Texas)

- [4.](#) Roskoski, R. Jr. (1969) Role of Divalent Cations on the Association of Rat Liver Ribosomal Subunits. *Arch. Biochem. Biophys.* **130**, 561-566.
- [5.](#) Landez, J.H., Roskoski, R. Jr. and Coppoc, G.L. (1969) Ethidium Bromide and Chloroquine Inhibition of Rat Liver Cell-Free Aminoacylation. *Biochem. Biophys. Acta* **195**, 276-279.
- [6.](#) Roskoski, R. Jr. and Jaskunas, S.R. (1972) Chloroquine and Primaquine Inhibition of Cell-Free Rat Liver Polypeptide Synthesis. *Biochem. Pharm.* **21**, 391-399.

From the Rockefeller University (New York, New York)

- [7.](#) Roskoski, R. Jr., Gevers, W., Kleinkauf, H. and Lipmann, F. (1970) Tyrocidine Biosynthesis by Three Complementary Fractions from *Bacillus brevis* (ATC 8185). *Biochemistry* **9**, 4839-4845.
- [8.](#) Roskoski, R. Jr., Kleinkauf, H., Gevers, W. and Lipmann, F. (1970) Isolation of Enzyme-Bound Peptide Intermediates in Tyrocidine Biosynthesis. *Biochemistry* **9**, 4846-4851.
- [9.](#) Kleinkauf, H., Gevers, W., Roskoski, R. Jr. and Lipmann, F. (1970) Enzyme-Bound Pantetheine in Tyrocidine Biosynthesis. *Biochem. Biophys. Res. Commun.* **41**, 1218-1222.
- [10.](#) Roskoski, R. Jr., Ryan, G., Kleinkauf, H., Gevers, W. and Lipmann, F. (1971) Polypeptide Biosynthesis from Thioesters of Amino Acids. *Arch. Biochem. Biophys.* **143**, 485-492.
- [11.](#) Lipmann, F., Gevers, W., Kleinkauf, H. and Roskoski, R. Jr. (1971) Polypeptide Synthesis on Protein Templates: The Enzymatic Synthesis of Gramicidin S and Tyrocidine. *Adv. Enzymol.* **35**, 1-37.
- [12.](#) Kleinkauf, H., Roskoski, R. Jr. and Lipmann, F. (1971) Pantetheine-Linked Peptide Intermediates in Gramicidin S and Tyrocidine Biosynthesis. *Proc. Natl. Acad. Sci. (U.S.)* **68**, 2069.
- [13.](#) Bauer, K., Roskoski, R. Jr., Kleinkauf, H. and Lipmann, F. (1972) Synthesis of a Linear Gramicidin by a Combination of Biosynthesis and Organic Methods. *Biochemistry* **11**, 3266-3271.
- [14.](#) Lee, S.G., Roskoski, R. Jr., Bauer, K. and Lipmann, F. (1973) Purification of the Polyenzymes Responsible for Tyrocidine Synthesis and their Dissociation into Subunits. *Biochemistry* **12**, 398-405.

From the Department of Biochemistry, the University of Iowa (Iowa City, Iowa)

- [15.](#) Roskoski, R. Jr. (1973) Choline Acetyltransferase: Evidence for an Acetyl-Enzyme Intermediate. *Biochemistry* **12**, 3709-3714.
- [16.](#) Rahmsdorf, H.J., Pai, S.H., Ponta, H., Herrlich, P., Schweiger, M. and Roskoski, R. Jr. (1974) Protein Phosphokinase Induction in *E. coli* by Bacteriophage T 7. *Proc. Natl. Acad. Sci. (U.S.)* **71**, 586-589.
- [17.](#) Roskoski, R. Jr. (1974) Choline Acetyltransferase: Inhibition by Thiol Reagents. *J. Biol. Chem.* **249**, 2156-2159.
- [18.](#) Roskoski, R. Jr. (1974) Choline Acetyltransferase: Reversible Inhibition by Bromoacetyl Coenzyme A and Bromoacetylcholine. *Biochemistry* **13**, 2295-2298.
- [19.](#) Roskoski, R. Jr., Ryan, L.D. and Diecke, F.J.P. (1974) γ -Aminobutyric Acid Synthesized in the Olfactory Nerve. *Nature* **251**, 526-529.
- [20.](#) Roskoski, R. Jr., Mayer, H.E. and Schmid, P.G. (1974) Acetylcholine Biosynthesis in Guinea Pig Heart *in vitro*. *J. Neurochem.* **23**, 1197-1200.
- [21.](#) Roskoski, R. Jr. (1974) Choline acetyltransferase: Reactions of the Active Site Sulfhydryl group. In: D. Richter (Editor) Lipmann Symposium: Energy Biosynthesis and Regulation in Molecular Biology, Walter deGruyter Verlag, Berlin-New York, pp. 534-547.
- [22.](#) Roskoski, R. Jr. (1974) Choline Acetyltransferase and Acetyl-cholinesterase: Evidence for Essential Histidine Residues. *Biochemistry* **13**, 5141-5144.
- [23.](#) Witt, J.J. and Roskoski, R. Jr. (1975) Rapid Protein Kinase Assay Using Phosphocellulose Paper Absorption. *Anal. Biochem.* **66**, 253-258.
- [24.](#) Roskoski, R. Jr., Schmid, P.G., Mayer, H.E. and Abboud, F.M. (1975) *In Vitro* Acetylcholine Biosynthesis in Normal and Failing Guinea Pig Hearts. *Circ. Res.* **36**, 547-552.
- [25.](#) Witt, J.J. and Roskoski, R. Jr. (1975) Bovine Brain Adenosine 3',5'-Monophosphate Dependent Protein Kinase: Mechanism of Regulatory Subunit Inhibition of the Catalytic Subunit. *Biochemistry* **14**, 4503-4507.
- [26.](#) Roskoski, R. Jr., Lim, C.T. and Roskoski, L.M. (1975) Human Brain and Placental Choline Acetyltransferase: Purification and Properties. *Biochemistry* **14**, 5101-5110.
- [27.](#) Ryan, L.D. and Roskoski, R. Jr. (1975) Selective Release of Newly-Synthesized and Newly-Captured GABA from Synaptosomes by Potassium Depolarization. *Nature* **258**, 254-256.
- [28.](#) Ryan, L.D. and Roskoski, R. Jr. (1976) Resolution and Reconstitution of Glutamate Decarboxylase from Cerebellum. *Neurochem. Res.* **1**, 37-45.
- [29.](#) Lais, L.T., Brody, M.J., Bhatnagar, R. and Roskoski, R. (1976) Evidence that Hypertension Appears in SHR in the Absence of Altered Sympathetic Nervous System Activity or Development. In: *Spontaneous Hypertension: Its Pathogenesis and Complications* (11) (K. Okamoto and F.M. Bumpus, eds.) U.S. Government Printing Office, 181-190.
- [30.](#) Roskoski, R. Jr. and Frederick, C.E. (1977) Subcellular Distribution of a Heat-Stable Protein Inhibition of Cyclic AMP-Dependent Protein Kinase in Rat Brain. *J. Neurochem.* **28**, 543-547.
- [31.](#) Ryan, L.D. and Roskoski, R. Jr. (1977) Net uptake of γ -Aminobutyric Acid by a High Affinity Synaptosomal Transport System. *J. Pharm. Exp. Ther.* **200**, 285-291.
- [32.](#) Roskoski, R. Jr., McDonald, R.I., Roskoski, L.M., Marvin, W.J. and Hermsmeyer, K. (1977) Choline Acetyltransferase Activity in Heart: Evidence for Neuronal and Not Myocardial Origin. *Am. J. Physiol.* **233**, H642-H646.
- [33.](#) Schmid, P.G., Greif, B.J., Lund, D.D. and Roskoski, R. Jr. (1978) Regional Choline Acetyltransferase Activity in the Guinea Pig Heart. *Circ. Res.* **42**, 657-660.
- [34.](#) Roskoski, R. Jr., Ngan, P., Mettenburg, R.M. and Lund, D.D. (1978) Isoproterenol Injection

Alters Protein Kinase DEAE-Cellulose Profiles in Selected Rat Tissues. *Biochem. Biophys. Res. Commun.* **82**, 641-647.

- [35.](#) Roskoski, R. Jr. and Roskoski, L.M. (1978) A Rapid Histidine Decarboxylase Assay. *Analyt. Biochem.* **87**, 293-297.
- [36.](#) Roskoski, R. Jr. (1978) Acceleration of Choline Uptake After Depolarization-Induced Acetylcholine Release in Rat Cortical Synaptosomes. *J. Neurochem.* **30**, 1357-1361.
- [37.](#) Lund, D.D., Schmid, P.G., Kelly, S.E., Corry, R.J. and Roskoski, R. Jr. (1978) Choline Acetyltransferase Activity in Rat Heart After Transplantation. *Am. J. Physiol.* **235**, H367-H371.
- [38.](#) Roskoski, R. Jr. (1978) Net Uptake of L-Glutamate and GABA by High Affinity Synaptosomal Transport Systems. *J. Neurochem.* **31**, 493-498.
- [39.](#) Lund, D.D., Knuepfer, M.M., Brody, M.J., Bhatnagar, R.K., Schmid, P.G. and Roskoski, R. Jr. (1978) Comparison of Tyrosine Hydroxylase and Choline Acetyltransferase Activity in Response to Sympathetic Nervous System Activation. *Brain Res.* **156**, 192-197.
- [40.](#) Roskoski, R. Jr. (1979) Net Aspartate Uptake by a High Affinity Synaptosomal Transport System. *Brain Res.* **160**, 85-93.
- [41.](#) Lund, D.D., Schmid, P.G. and Roskoski, R. Jr. (1979) Choline Acetyltransferase Activity in Heart Following Vagotomy. *Am. J. Physiol.* **236**, H620-H623.
- [42.](#) Witt, J.J. and Roskoski, R. Jr. (1980) Adenosine 3',5'-Monophosphate Dependent Protein Kinase: Interaction with Guanidinium Compounds. *Arch. Biochem. Biophys.* **201**, 36-43.
- [43.](#) Witt, J.J. and Roskoski, R. Jr. (1980) Cyclic 3,5'-Adenosine Monophosphate Dependent Protein Kinase: Active Site Directed Inhibition by Cibacron Blue F3GA. *Biochemistry* **19**, 143-148.
- [44.](#) Marvin, W.J. Jr., Hermsmeyer, K., McDonald, R.I., Roskoski, L.M. and Roskoski, R. Jr. (1980) Ontogenesis of Cholinergic Innervation in Rat Heart. *Circ. Res.* **46**, 690-695.
- [45.](#) Oderfeld-Nowak, B., Potempska, A. and Roskoski, R. Jr. (1980) Acetylcholine Levels Increase in Rat Hippocampus following Acute Septal Lesions: Evidence for Interaction between Cholinergic and Non-cholinergic Neurons. *Neuroscience* **5**, 1699-1703.

From the Department of Biochemistry and Molecular Biology, Louisiana State University Health Sciences Center (New Orleans, Louisiana)

- [46.](#) Vrana, K.E., Allhiser, C.L. and Roskoski, R. Jr. (1981) Tyrosine Hydroxylase Activation and Inactivation by Protein Phosphorylation Conditions. *J. Neurochem.* **36**, 92-100.
- [47.](#) Roskoski, R. Jr., Rauch, N. Roskoski, L.M. (1981) Glutamate, Aspartate and γ -Aminobutyrate Transport by Membrane Vesicles Prepared from Rat Brain. *Arch. Biochem. Biophys.* **207**, 407-415.
- [48.](#) Roskoski, R. Jr. (1981) Comparison of DABA and GABA Transport into Plasma Membrane Vesicles Derived from Synaptosomes. *J. Neurochem.* **36**, 544-550.
- [49.](#) Crockatt, L.H., Lund, D.D., Schmid, P.G. and Roskoski, R. Jr. (1981) Hypoxia-Induced Changes in Parasympathetic Neurochemical Markers in Guinea Pig Heart. *J. Appl. Phys.* **50**, 1017-1021.
50. Schmid, P.G., Lund, D.D. and Roskoski, R. Jr. (1981) Efferent Autonomic Dysfunction in Heart Failure. In: *Disturbances in Neurogenic Control of the Circulation*, American Physiological Society, edited by F.M. Abboud, H.A. Fozzard, J.P. Gilmore and D.J. Reis, Bethesda, 33-49.
- [51.](#) Dickson, D.W., Lund, D.D., Subieta, A.R., Prall, J.L., Schmid, P.G. and Roskoski, R. Jr. (1981) Regional Distribution of Tyrosine Hydroxylase and Dopamine Beta-Hydroxylase

- Activities in Guinea Pig Heart. *J. Autonomic Nervous System* **4**, 319-326.
- [52.](#) Lund, D.D., Schmid, P.G., Bhatnagar, R.K. and Roskoski, R. Jr. (1982) Changes in Parasympathetic and Sympathetic Neurochemical Indices in Hearts of Myopathic Hamsters. *J. Autonomic Nervous System* **5**, 237-246.
- [53.](#) Cook, P.F., Neville, M.E., Vrana, K.E., Hartl, F.T., and Roskoski, R. Jr. (1982) Cyclic 3',5'-Adenosine Monophosphate-Dependent Protein Kinase: Kinetic Mechanism for the Bovine Skeletal Muscle Catalytic Subunit. *Biochemistry* **21**, 5794-5799.
- [54.](#) F. Thomas Hartl and R. Roskoski, Jr. (1982) Cyclic AMP-Dependent Protein Kinase from Bovine Brain: Inactivation of the Catalytic Subunit and the Holoenzyme by 7-Chloro-4-nitrobenzo-2-oxa-1,3-diazole (NBD-Cl). *Biochemistry* **21**, 5175-5183.
- [55.](#) Lund, D.D., Schmid, P.G., Johannsen, U.J. and Roskoski, R. Jr. (1982) Biochemical Indices of Cholinergic and Adrenergic Autonomic Innervation in Dog Heart: Disparate Alterations in Chronic Right Heart Failure. *J. Mol. Cell. Cardiol.* **14**, 419-425.
- [56.](#) Schmid, P.G., Lund, D.D., Davis, J.A., Whiteis, C.A., Bhatnagar, R.K. and Roskoski, R. Jr. (1982) Selective Sympathetic Neural Changes in Hypertrophied Right Ventricle. *Am. J. Physiol.* **243**, 175-4180.
- [57.](#) Schmid, P.G., Greif, B.J., Lund, D.D. and Roskoski, R. Jr. (1982) Tyrosine Hydroxylase and Choline Acetyltransferase Activities in Ischemic Canine Heart. *Am. J. Physiol.* **243**, H788-H795.
- [58.](#) Roskoski, R. Jr. (1983) Regional Distribution of Choline Acetyltransferase and Multiple Affinity Forms of the Muscarinic Receptor in Heart. *Adv. Exp. Med. Biol.* **161**, 159-178.
- [59.](#) Lund, D.D., Schmid, P.G. and Roskoski, R. Jr. (1983) Neurochemical Indices of Autonomic Innervation of Heart in Different Experimental Models of Heart Failure. *Adv. Exp. Med. Biol.* **161**, 179-198.
- [60.](#) Roskoski, R. Jr. (1983) Assays of Protein Kinase. *Methods in Enzymology* **99**, 3-6.
- [61.](#) Vrana, K.E. and Roskoski, R. Jr. (1983) Tyrosine Hydroxylase Inactivation Following cAMP-Dependent Phosphorylation Activation: Effect of Pterin Co-substrate. *J. Neurochem.* **40**, 1692-1700.
- [62.](#) Hartl, F. Thomas, Roskoski, Robert Jr., Rosendahl, Mary S. and Leonard, Nelson J. (1983) Adenosine 3':5'-Cyclic Monophosphate Dependent Protein Kinase: Interaction of the Catalytic Subunit and Holoenzyme with lin-Benzo adenine Nucleotides. *Biochemistry* **22**, 2347-2352.
- [63.](#) Hartl, F. Thomas and Roskoski, Robert Jr. (1983) Adenosine 3':5'-Cyclic Monophosphate Dependent Protein Kinase: Comparison of Type II Enzymes from Bovine Brain, Skeletal Muscle, and Cardiac Muscle. *J. Biol. Chem.* **258**, 3950-3955.
- [64.](#) Reinhardt, R.R. and Roskoski, R. Jr. (1983) Methacholine Induced Decrease of the Cholinergic Muscarinic Receptor Content in the Perfused Working Rat Heart. *J. Pharmacol. Exp. Ther.* **226**, 135-139.
- [65.](#) Bhatnagar, D., Roskoski, R. Jr., Rosendahl, M.S. and Leonard, N.J. (1983) Adenosine Cyclic 3',5'-Monophosphate Dependent Protein Kinase: A New Fluorescence Displacement Titration Technique for Mapping the Nucleotide-Binding Site on the Catalytic Subunit. *Biochemistry* **22**, 6310-6317.
- [66.](#) Clinton, G.M. and Roskoski, R. Jr. (1984) Tyrosyl and cAMP-Dependent Protein Kinase Activities in BHK Cells that Express Viral pp60^{src}. *Cell. Mol. Biol.* **4**, 973-977.
- [67.](#) Rauch, N. and Roskoski, R. Jr. (1984) Cyclic AMP-Dependent Phosphorylation of Neuronal Membrane Proteins. *J. Neurochem.* **43**, 755-762.
- [68.](#) Roskoski, R. Jr. (1985) Isozymes of Cyclic 3',5'-Adenosine Monophosphate Dependent Protein Kinase. In: Lipmann Symposium: Cellular Regulation and Malignant Growth, S.

- Ebashi ed., Japan Scientific Societies Press, Tokyo, 228-239.
69. Bhatnagar, D., Hartl, F.T., Roskoski, R. Jr., Lessor, R.A. and Leonard, N.J. (1984) Adenosine Cyclic 3',5'-Monophosphate-Dependent Protein Kinase: Nucleotide Binding to Chemically Modified Catalytic Subunit. *Biochemistry* **23**, 4350-4356.
 70. Roskoski, R. Jr., Reinhardt, R.R., Enseleit, W., Johnson, W.D. and Cook, P.F. (1985) Cardiac Cholinergic Muscarinic Receptors: Changes in Multiple Affinity Forms with Down-Regulation. *J. Pharmacol. Exp. Ther.* **232**, 754-759.
 71. Bhatnagar, D., Glass, D.B., Roskoski, R. Jr., Lessor, R.A. and Leonard, N.J. (1985) Interaction of Guanosine Cyclic 3',5'-Monophosphate Dependent-Protein kinase with lin-Benzo adenine Nucleotides. *Biochemistry* **24**, 1122-1129.
 72. Roskoski, R. Jr., Guthrie, R. Jr., Roskoski, L.M. and Rossowski, W. (1985) Degradation of Rat Brain Muscarinic Receptors *in Vitro*: Enhancement by Agonists and Inhibition by Antagonists. *J. Neurochem.* **45**, 1096-1100.
 73. Puri, R.N., Bhatnagar, D. and Roskoski, R. Jr. (1985) Adenosine Cyclic 3',5'-monophosphate Dependent Protein Kinase: Fluorescent Affinity Labeling of the Catalytic Subunit from Bovine Skeletal Muscle with *o*-Phthalaldehyde. *Biochemistry* **24**, 6499-6508.
 74. Puri, R.N., Bhatnagar, D., Glass, D.B. and Roskoski, R. Jr. (1985) Inactivation of Guanosine Cyclic 3',5'-Monophosphate Dependent Protein Kinase from Bovine Lung with *o*-Phthalaldehyde. *Biochemistry* **24**, 6508-6514.
 75. Roskoski, R. Jr. (1986) Fritz Lipmann (obituary). *ASM News* **52**, 643-644.
 76. Roskoski, R. Jr. (1987) Cholinergic Muscarinic Receptor Characterization and Regulation in Tissues Innervated by the Autonomic Nervous System. *Rev. Basic Clin. Pharm.* **6**, 1-60.
 77. Roskoski, R. Jr. and Roskoski, L.M. (1987) Activation of Tyrosine Hydroxylase in PC12 Cells by the Cyclic GMP and Cyclic AMP Second Messenger Systems. *J. Neurochem.* **48**, 236-242.
 78. Roskoski, R. Jr., Vulliet, P.R., and Glass, D.B. (1987) Phosphorylation of Tyrosine Hydroxylase by Cyclic GMP-Dependent Protein Kinase. *J. Neurochem.* **48**, 840-845.
 79. Roskoski, R. Jr. (1987) Fritz Lipmann (1899-1986): An Appreciation. *Trends in Biochemical Sciences* **12**, 136-138.
 80. Kubinec, J., Vrana, K.E., and Roskoski, R. Jr. (1987) Paraoxon-Induced Decrease in the Muscarinic Acetylcholine Receptor Content in Rat Heart. *Eur. J. Pharmacol.* **136**, 295-301.
 81. Roskoski, R. Jr. (1987) Biochemistry (Chapter 4). In: *Rypin's Basic Science Questions and Answers* (E.D. Frohlich, ed.), J.B. Lippincott, Co.; Philadelphia, PA. pp. 65-83.
 82. Roskoski, R. Jr. (1987) Determination of Pyridine Nucleotides and Nicotinamide by Fluorescence and Optical Techniques. *Pyridine Nucleotide Coenzymes: Chemical, Biochemical and Medical Aspects*, Vol. 2B. (D. Dolphin, R. Poulson, and O. Avramovic, eds.) Wiley Interscience, New York. pp. 173-188.
 83. Roskoski, R. Jr. (1988) Regulation of Tyrosine Hydroxylase Activity by the Cyclic GMP and Cyclic AMP Second Messenger Systems. In: *Progress in Catecholamine Research Part A: Basic Aspects and Peripheral Mechanisms* (Annica Dahlstrom, ed.), A.R. Liss, Inc., New York. pp. 67-70.
 84. Roskoski, R. Jr. (1988) Fritz Lipmann, Phosphoproteins and Regulation of Aromatic Amino Acid Hydroxylase Activity. In: *The Roots of Modern Biochemistry* (ed. H. Kleinkauf) Walter deGruyter, Berlin. pp. 791-804.
 85. Puri, R. and Roskoski, R. Jr. (1988) Inactivation of Fructose-1,6-Bisphosphatase by *o*-Phthalaldehyde. *Biochem. Biophys. Res. Commun.* **150**, 1088-1095.
 86. Bhatnagar, D., Glass, D.B., Roskoski, R. Jr., Lessor, R.A. and Leonard, N.J. (1988) Synthetic Peptide Analogues Alter the Binding Affinities of Cyclic Nucleotide-Dependent Protein

- Kinase for Nucleotide Substrates. *Biochemistry* **27**, 1988-1994.
- [87.](#) Cheng, A., Fitzgerald, T.J., Bhatnagar, D., Roskoski, R. Jr. and Carlson, G.M. (1988) Allosteric Nucleotide Specificity of Phosphorylase Kinase: Utilization of lin-Benzo-ADP to Measure the Binding of Other Nucleoside Diphosphates, Including the Phosphothioates of ADP. *J. Biol. Chem.* **263**, 5534-5543.
 - [88.](#) Wilgus, H. and Roskoski, R. Jr. (1988) Inactivation of Tyrosine Hydroxylase Activity By Ascorbate *in Vitro* and in Rat PC12 Cells. *J. Neurochem.* **51**, 1232-1239.
 - [89.](#) Puri, R.N. and Roskoski, R. Jr. (1988) Inactivation of Yeast Hexokinase by 2-Aminothiophenol: Evidence for Half-the-Sites Mechanism. *Biochem. J.* **254**, 819-827.
 - [90.](#) Puri, R.N. and Roskoski, R. Jr. (1988) Reaction of Low Molecular Weight Amino thiols with *o*-Phthalaldehyde. *Analytic. Biochem.* **173**, 26-32.
 - [91.](#) Puri, R.N., Bhatnagar, D. and Roskoski, R. Jr. (1988) Inactivation of Yeast Hexokinase by *o*-Phthalaldehyde: Evidence for the Presence of a Cysteine and a Lysine at or near the Active Site. *Biochim. Biophys. Acta* **951**, 34-46.
 - [92.](#) Bhatnagar, D., Burton, A.A., and Roskoski, R. Jr. (1988) Differential Sensitivity of Neural and Non-Neural Protein Kinase Isozymes to Cyclic AMP. *Biochem. Res. Commun.* **156**, 801-806.
 93. Roskoski, R. Jr. (1989) Biochemistry: in *Rypin's Medical Boards Review*, 15th edition, (E.D. Frohlich, editor). J.B. Lippincott Company, Philadelphia. pp. 293-401.
 - [94.](#) Roskoski, R. Jr. and Roskoski, L. M. (1989) Adenosine Receptor Activation and the Regulation of Tyrosine Hydroxylase Activity in PC12 and PC18 Cells. *J. Neurochem.*, **53**, 1934-1940.
 - [95.](#) Roskoski, R. Jr., White, L., Knowlton, R., and Roskoski, L.M. (1989) Regulation of Tyrosine Hydroxylase Activity by Neuropeptides of the Secretin Family. *Mol. Pharmacol.*, **36**, 925-931.
 - [96.](#) Roskoski, R. Jr., Wilgus, H., and Vrana, K.E. (1990) Inactivation of Tyrosine Hydroxylase by Pterin Substrates Following Phosphorylation by Cyclic AMP-dependent Protein Kinase. *Mol. Pharmacol.*, **38**, 541-546.
 - [97.](#) Roskoski, R. Jr. and Ritchie, P. (1991) Phosphorylation of Rat Tyrosine Hydroxylase and Its Model Peptides *in vitro* by Cyclic AMP-Dependent Protein Kinase. *J. Neurochem.*, **56** 1019-1023.
 - [98.](#) Gahn, L.G. and Roskoski, R. Jr., (1991) Tyrosine Hydroxylase Purification from Rat PC12 Cells, *Protein Expression Purific.*, **2**, 10-14.
 99. Roskoski, R. Jr. (1993) Biochemistry (Chapter 4). In: *Rypin's Basic Science Questions and Answers*, 2nd edition, (E.D. Frohlich, ed.), J.B. Lippincott, Co.; Philadelphia. pp. 81-107.
 100. Roskoski, R. Jr. (1993) Biochemistry: in *Rypin's Medical Boards Review*, 16th edition, (E.D. Frohlich, editor). J.B. Lippincott Company, Philadelphia. pp. 299-413.
 - [101.](#) Puri, R. N. and Roskoski, R. Jr. (1993) Inactivation of yeast hexokinase by Cibacron brilliant red 3B-A. *Arch. Biochem. Biophys.* **303**, 288-295.
 - [102.](#) Gahn, L. G. and Roskoski, R. Jr. (1993) Tyrosine Hydroxylase Activity and Extrinsic Fluorescent Changes Produced by Polyanions. *Biochem. J.* **295**, 189-194.
 - [103.](#) Roskoski, R. Jr., Gahn, L. G., and Roskoski, L. M. (1993) Inactivation of Phosphorylated Rat Tyrosine Hydroxylase by Ascorbate *in Vitro*. *Eur. J. Bio.* **218**, 363-370.
 - [104.](#) Puri, R. N. and Roskoski, R. Jr. (1994) Inactivation of Yeast Hexokinase by Cibacron Blue 3g-a: Spectral, Kinetic, and Structural Investigations. *Biochem. J.* **300**, 91-97.
 - [105.](#) Walker, J. J., Liu, X., Roskoski, R. Jr., and Vrana, K. E. (1994) Catalytic Core of Rat Tyrosine Hydroxylase: Terminal Deletion Analysis of Bacterially-expressed Enzyme. *Biochim. Biophys. Acta* **1206**, 113-119.

- [106.](#) Roskoski, R. Jr., Patricia Ritchie, and Laura G. Gahn (1994) Farnesyl-protein Transferase and Geranylgeranyl-protein Transferase Assays Using Phosphocellulose Paper Absorption. *Analytic. Biochem.* **222**, 275-280.
- [107.](#) Gahn, L. G. and Roskoski, R. Jr. (1995) Thermal Stability and CD Analysis of Rat Tyrosine Hydroxylase. *Biochemistry*, **34**, 252-256.
108. Roskoski, R. Jr. (1996) *Biochemistry*, W.B. Saunders Co. Philadelphia. pp. 1-530.
109. Roskoski, R. Jr. and Herbert, J. D. (1996) *Biochemistry Review*, W.B. Saunders Co. Philadelphia. pp. 1-242.
110. Roskoski, R. Jr. (1997) *Biochemistry*, (Chapter 4). In: *Rypin's Basic Science Questions and Answers*, 3rd edition, (E.D. Frohlich, ed.), J.B. Lippincott, Co.; Philadelphia. pp. 99-125.
111. Roskoski, R. Jr. (1997) *Biochemistry: in Rypin's Medical Boards Review*, 17th edition, (E.D. Frohlich, editor). J.B. Lippincott Company, Philadelphia. pp. 279-389.
- [112.](#) Roskoski, R. Jr. (1998) and Ritchie, P. (1998) Role of the Carboxyterminal Residue in Peptide Binding to Protein Farnesyltransferase and Protein Geranylgeranyltransferase. *Archiv. Biochem. Biophys.* **356**, 167-176.
- [113.](#) Xu, Y., Stokes, A.H., Roskoski, R. Jr. and Vrana, K.E. (1998) Dopamine, in the presence of tyrosinase, covalently modifies and inactivates tyrosine hydroxylase. *J. Neuro. Res.* **54**, 691-697.
- [114.](#) Roskoski R. Jr. and Ritchie, P.A. (2001) Time-Dependent Inhibition of Protein Farnesyltransferase by a Benzodiazepine Peptide Mimetic, *Biochemistry* **40**, 9329-9335.
115. Roskoski R. Jr. (2001) *Biochemistry: in Rypin's Medical Boards Review*, 18th edition, (E.D. Frohlich, editor). J.B. Lippincott Company, Philadelphia. pp. 263-383.
116. Roskoski R. Jr. (2001) *Biochemistry*, (Chapter 4). In: *Rypin's Basic Science Questions and Answers*, 3rd edition, (E.D. Frohlich, ed.), J.B. Lippincott, Co.; Philadelphia. pp. 105-137.
117. Roskoski R. Jr. (2002) *Energy Metabolism*, In: McGraw-Hill Encyclopedia of Science and Technology, 9th edition, McGraw-Hill and Co., New York. **6**, pp. 524-526.
- [118.](#) Roskoski R. Jr. (2003) Protein prenylation: A pivotal posttranslational process, *Biochem. Biophys. Res. Commun.* **303**, 1-7.
- [119.](#) Roskoski, R. Jr. (2003) Sti-571: an Anticancer Protein-tyrosine Kinase Inhibitor. *Biochem. Biophys. Res. Commun.*, **309**, 709-717.
- [120.](#) Roskoski, R. Jr. (2004) *Enzymes*, xPharm, Ed. Byland, D.B. and Enna, S. J., Elsevier Science, Inc. http://www.xpharm.com/citation?Article_ID=75.
- [121.](#) Roskoski, R. Jr. (2004) *Enzyme Assays*, xPharm, Ed. Byland, D.B. and Enna, S. J., Elsevier Science, Inc. http://www.xpharm.com/citation?Article_ID=77.
- [122.](#) Roskoski, R. Jr. (2004) *Enzyme Structure and Function*, xPharm, Ed. Byland, D.B. and Enna, S. J., Elsevier Science, Inc. http://www.xpharm.com/citation?Article_ID=19626.
- [123.](#) Roskoski, R. Jr. (2004) *Michaelis Menten Theory*, xPharm, Ed. Byland, D.B. and Enna, S. J., Elsevier Science, Inc. http://www.xpharm.com/citation?Article_ID=78.
- [124.](#) Roskoski, R. Jr. (2004) *Modulation of Enzyme Activity*, xPharm, Ed. Byland, D.B. and Enna, S. J., Elsevier Science, Inc. http://www.xpharm.com/citation?Article_ID=79.
- [125.](#) Roskoski, R. Jr. (2004) The ErbB/her Receptor Protein-tyrosine Kinases and Cancer. *Biochem. Biophys. Res. Commun.* **319**, 1-11.
- [126.](#) Roskoski, R. Jr. (2004) Src Protein-tyrosine Kinase Structure and Regulation. *Biochem Biophys Res. Commun.* **324**, 1155-64.
- [127.](#) Roskoski, R. Jr. (2005) Src Kinase Regulation by Phosphorylation and Dephosphorylation. *Biochem Biophys. Res. Commun.* **331**, 1-14.
- [128.](#) Roskoski, R. Jr. (2005) Signaling by Kit Protein-tyrosine Kinase-the Stem Cell Factor Receptor. *Biochem Biophys Res. Commun.* **337**, 1-13.

- [129.](#) Roskoski, R. Jr. (2005) Structure and Regulation of Kit Protein-tyrosine Kinase-the Stem Cell Factor Receptor. *Biochem Biophys. Res. Commun.* **338**, 1307-1317.
- [129b.](#) Hu SS, Bradshaw HB, Benton VM, Chen JS, Huang SM, Minassi A, Bisogno T, Masuda K, Tan B, Roskoski R Jr, Cravatt BF, Di Marzo V, Walker JM. (2009) the Biosynthesis of *N*-Arachidonoyl Dopamine (NADA), a Putative Endocannabinoid and Endovanilloid, via Conjugation of Arachidonic Acid with Dopamine. *Prostaglandins Leukot Essent Fatty Acids.* **81**, 291-301.

From the Blue Ridge Institute for Medical Research (Horse Shoe, North Carolina)

- [130.](#) Roskoski, R. Jr. (2007) *Protein Kinase*, In: McGraw-Hill Encyclopedia of Science and Technology, 10th edition, McGraw-Hill and Co., New York. **14**, pp. 512-514.
- [131.](#) Roskoski, R. Jr. (2007) *Biological Oxidation*, In: McGraw-Hill Encyclopedia of Science and Technology, 10th edition, McGraw-Hill and Co., New York. **2**, pp. 51-53.
- [132.](#) Roskoski, R. Jr. (2007) *Adenosine Triphosphate*, In: McGraw-Hill Encyclopedia of Science and Technology, 10th edition, McGraw-Hill and Co., New York. **1**, pp. 147-148.
- [133.](#) Roskoski, R. Jr. and Greenberg, D. M. (2007) *Protein Metabolism*, In: McGraw-Hill Encyclopedia of Science and Technology, 10th edition, McGraw-Hill and Co., New York. **14**, pp. 514-518.
- [134.](#) Roskoski, R. Jr. (2007) *Energy Metabolism*, In: McGraw-Hill Encyclopedia of Science and Technology, 10th edition, McGraw-Hill and Co., New York. **6**, pp. 541-543.
- [135.](#) Roskoski, R. Jr. (2007) Vascular Endothelial Growth Factor (VEGF) Signaling in Tumor Progression. *Crit. Rev. Oncol. Hematol.* **62**, 179-213.
- [136.](#) Roskoski, R. Jr. (2007) Sunitinib: A VEGF and Pdgf Receptor Protein Kinase and Angiogenesis Inhibitor. *Biochem. Biophys. Res. Commun.* **356**, 323-328.
- [137.](#) Roskoski, R. Jr. (2008) Vegf Receptor Protein-tyrosine Kinases: Structure and Regulation. *Biochem. Biophys. Res. Commun.* **375**, 287-291.
- [138.](#) Roskoski, R. Jr. (2010) RAF Protein-serine/threonine Kinases: Structure and Regulation. *Biochem. Biophys. Res. Commun.* **399**, 313-317.
- [139.](#) Roskoski, R. Jr. (2012) MEK1/2 Dual Specificity Protein Kinases: Structure and Regulation. *Biochem. Biophys. Res. Commun.* **417**, 5-10.
- [140.](#) Roskoski, R. Jr. (2012) ERK1/2 MAP kinases: structure, function, and regulation. *Pharmacol. Res.* **66**, 105-143.
- [141.](#) Roskoski, R. Jr. (2013) Anaplastic lymphoma kinase (ALK): Structure, Oncogenic Activation, and pharmacological inhibition. *Pharmacol. Res.* **68**, 68-94.
- [142.](#) Roskoski, R. Jr. (2013) The Preclinical Profile of Crizotinib for the Treatment of Non-small-Cell Lung Cancer and Other Neoplastic Disorders. *Expert Opin. Drug Discov.* **8**, 1165-1179.
- [143.](#) Roskoski, R. Jr. (2014) The ErbB/HER Family of protein-tyrosine kinases and cancer. *Pharmacol. Res.* **79**, 34-74.
- [144.](#) Roskoski, R. Jr. (2014) ErbB/HER protein-tyrosine kinases: structures and small molecule inhibitors. *Pharmacol. Res.* **87**, 42-59.
- [145.](#) Alexander SP, Benson HE, Faccenda E, Pawson AJ, Sharman JL, McGrath JC, Roskoski R. Jr. et al. (2013) the Concise Guide to Pharmacology 2013/2014. *Br. J. Pharmacol.* **170**:1449-58.
- [146.](#) Tekin I, Roskoski R Jr, Carkaci-Salli N, Vrana KE. (2014) Complex Molecular Regulation of Tyrosine Hydroxylase. *J. Neural Transm.* **121**, 1451-1481.

- [147.](#) Roskoski, R. Jr. (2015) Src protein-tyrosine kinase structure, mechanism, and small molecule inhibitors. *Pharmacol. Res.* **94**, 9-25.
- [148.](#) Roskoski, R. Jr. (2015) A historical overview of protein kinases and their targeted small molecule inhibitors. *Pharmacol. Res.* **100**, 1-23.
- [149.](#) Roskoski, R. Jr. (2016) Classification of small molecule protein kinase inhibitors based upon the structures of their drug-enzyme complexes. *Pharmacol. Res.* **103**, 26-48.
- [150.](#) Roskoski, R. Jr. (2016) Cyclin-dependent protein kinase inhibitors including palbociclib anticancer drugs. *Pharmacol. Res.* **107**, 249-275.
- [151.](#) Roskoski, R. Jr. (2016) Janus kinase (JAK) inhibitors in the treatment of inflammatory and neoplastic diseases. *Pharmacol. Res.* **111**, 284-803.
- [152.](#) Roskoski, R. Jr. (2016) Ibrutinib inhibition of Bruton protein-tyrosine kinase (BTK) in the treatment of B cell neoplasms. *Pharmacol. Res.* **113**, 395-408.
- [153.](#) Roskoski, R. Jr. (2017) Allosteric MEK1/2 inhibitors including cobimetinib and trametinib in the treatment of cutaneous melanomas. *Pharmacol. Res.* **117**, 20-31.
- [154.](#) Roskoski, R. Jr. (2017) Anaplastic lymphoma kinase (ALK) inhibitors in the treatment of ALK-driven lung cancers. *Pharmacol. Res.* **117**, 343-356.
- [155.](#) Roskoski, R. Jr. (2017) Guidelines for preparing figures for everyone including the colorblind. *Pharmacol. Res.* **119**, 217-218.
- [156.](#) Roskoski, R. Jr. (2017) Vascular endothelial growth factor (VEGF) and VEGF receptor inhibitors in the treatment of renal cell carcinomas. *Pharmacol. Res.* **120**, 116-132.
- [157.](#) Roskoski, R. Jr. (2017) ROS1 protein-tyrosine kinase inhibitors in the treatment of ROS1-fusion-protein driven non-small cell lung cancers. *Pharmacol. Res.* **121**, 202-212.